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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,326	09/10/2004	Takahiro Nakano	SIC-04-034	5325
29863	7590	02/22/2010	EXAMINER	
DELAND LAW OFFICE			IRVIN, THOMAS W	
P.O. BOX 69			ART UNIT	
KLAMATH RIVER, CA 96050-0069			PAPER NUMBER	
			3657	
			NOTIFICATION DATE	
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			02/22/2010	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

bdeland1992@gmail.com  
jdeland@sisqtel.net

<b>Office Action Summary</b>	<b>Application No.</b> 10/711,326	<b>Applicant(s)</b> NAKANO ET AL.	
	<b>Examiner</b> THOMAS IRVIN	<b>Art Unit</b> 3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-14,16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-14,16 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 19 January 2010 has been entered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-14, 16, and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 13 define a radially inwardly facing spline and a radially outwardly facing spline; however, with reference to the figure 6A and 6B, it appears that only a single spline exists.

### ***Claim Rejections - 35 USC § 102***

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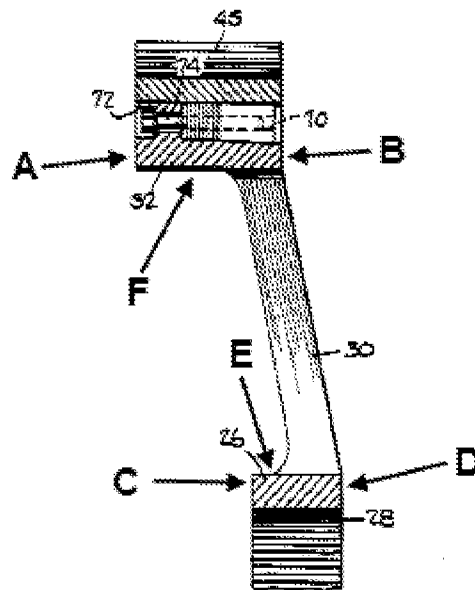
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-14, 16, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Militana (3,168,836).



**Fig. 4 (US 3,168,836)**

In Re claim 1, Militana discloses, with reference to fig. 4 above, a sprocket comprising: a sprocket body (20) with a first side wall (A), a second side wall surface (D), and a radially inner surface (F) facing radially inwardly; a plurality of teeth (45); a

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radially inwardly and outwardly extending spline (28); wherein the spline has a free end portion (26) and a radially outer surface (E) that is disposed between the first and second side wall surfaces; and wherein the radially outer surface faces the radially inner surface. Examiner notes that the radially inwardly extending spline and radially outwardly extending spline are understood to be the protrusions and corresponding depressions of the spline.

In Re claims 3 and 4, see radially inner surface (F) in fig. 4, above.

In Re claims 5-7, see first side wall portion (24) and teeth (45), and laterally offset second side wall portion (26,30).

In Re claims 8 and 9, see first side surface (A) and side wall portion (24), and laterally offset second side wall portion (26,30) and radially inwardly extending spline (28).

In Re claim 10, see first side wall portion (24) and teeth (45), and second side wall portion (26) and radially inwardly extending spline (28) forming a composite spline.

In Re claim 11, see radially inwardly extending spline (28) and second side wall portion (30).

In Re claim 12, Militana appears to show that the first sidewall portion (24) and second side wall portion (26) are substantially equal in thickness in figs. 1 and 2.

In Re claim 13, Militana discloses, with reference to fig. 4 above, a sprocket comprising: a sprocket body (20); a plurality of teeth (45); a radially inwardly and outwardly extending spline (28), wherein the spline has a root portion (30,32) and a radially inner portion (26) having a side wall (C,D); wherein the spline terminates at a

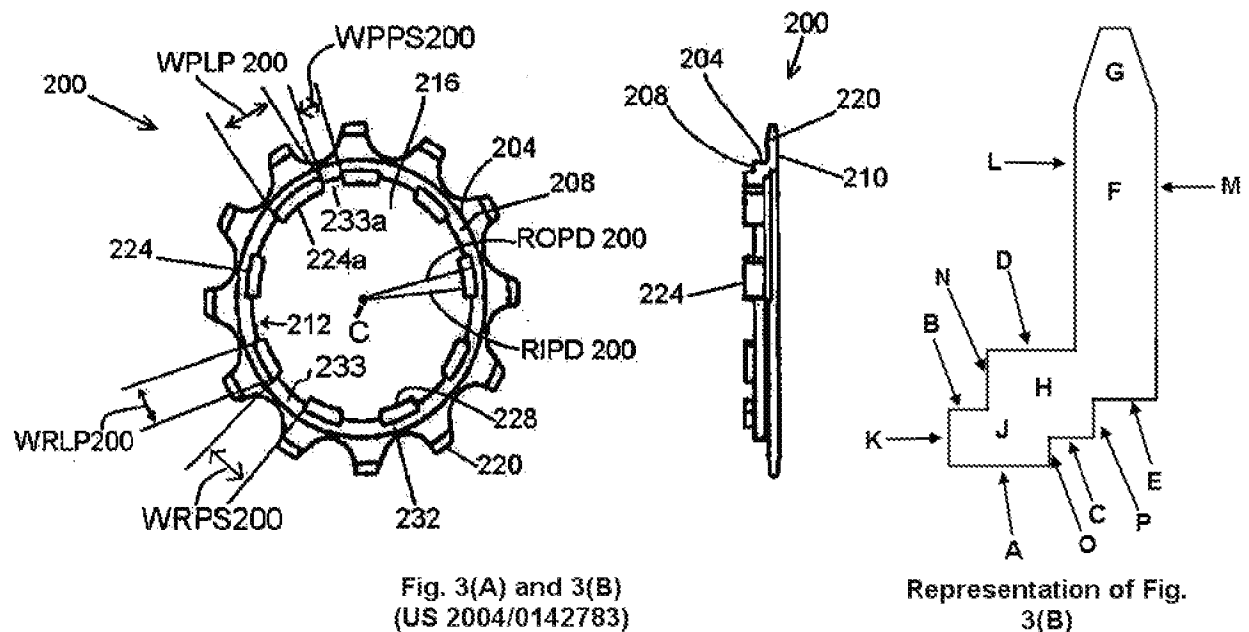
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free end (26); and wherein a thickness of the radially inner portion (26) is greater than a thickness of the root portion (30). Examiner notes that the radially inwardly extending spline and radially outwardly extending spline are understood to be the protrusions and corresponding depressions of the spline.

In Re claim 14, see side wall (A), first side wall portion (24), teeth (45), and root portion (32).

In Re claims 16 and 18, the sprocket is understood to meet the limitations of being one-piece when fully assembled (see fig. 1).

Claims 13, 14, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamada et al. (2004/0142783).



In Re claim 13, Kamada et al. disclose, with reference to figs. 3A and 3B above, a sprocket comprising: a sprocket body (200,F); a plurality of teeth (G); a radially

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inwardly and outwardly extending spline (A, C), wherein the spline has a root portion (H) and a radially inner portion (J) having a side wall (K, O); wherein the spline terminates at a free end (K); and wherein a thickness of the radially inner portion (J, K-O) is greater than a thickness of the root portion (H, N-O). Examiner notes that the radially inwardly extending spline and radially outwardly extending spline are understood to be the protrusions and corresponding depressions of the spline.

In Re claim 14, the sprocket has a side wall (M) and first side wall portion (F), wherein the plurality of teeth (G) extend from the first side wall portion, and wherein a thickness of the first side wall portion (L-M) substantially equals a thickness of the root portion (H, N-L, L-M).

In Re claim 18, Kamada et al. disclose that the sprocket is one-piece.

### ***Response to Arguments***

The new 112 2<sup>nd</sup> paragraph rejections are made in view of a newly understood appreciation for what applicant is attempting to claim by reciting “radially outwardly extending spline” and “radially inwardly extending spline”.

Applicant's arguments with respect to claims 1, 3-12, and 16 have been considered but are moot in view of the new ground(s) of rejection.

The indicated allowability of claims 13, 14, and 18 is withdrawn in view of both Kamada et al. (2004/0142783) and Militana (3,168,836).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS IRVIN whose telephone number is (571)270-3095. The examiner can normally be reached on M-F 10-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas Irvin/  
Examiner, Art Unit 3657

/Bradley T King/  
Primary Examiner, Art Unit 3657